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AIR RAID PRECAUTIONS

MEMORANDUM No. 1

(2nd Edition)

ORGANISATION OF AIR RAID CASUALTIES SERVICES

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(Air Raid Precautions Department)*



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INTRODUCTION

The purpose of this Memorandum is to outline the type of organisation to be set up by local authorities to provide first aid and hospital treatment for air raid casualties, and means of treating persons who have been contaminated with gas, whether or not they are also casualties requiring medical treatment.

The most suitable local organisation will vary with the character of the area concerned. In this Memorandum the outlines are given of the organisation suggested as appropriate for a large county borough, followed by some notes on the type of arrangements suitable for county areas in England and Wales, where the requirements will be met by schemes following much simpler lines. The application of the same general principles to local government conditions in Scotland is described in Part IV. Finally, reference is made to the need for definite schemes of mutual assistance between neighbouring areas.

The first step is to draw up a general plan for the arrangements required in each district, on the lines suggested in this Memorandum. This is primarily a matter of framing the appropriate organisation and preparing lists and schedules of the buildings and equipment required, including details of any necessary adaptations of buildings. The plan need not follow any arbitrary model form, but should be adapted and adjusted to take advantage of all local facilities which could usefully be incorporated.

When the plan has been prepared, the further action falls under two heads—the training of the necessary personnel and the assessment of any further equipment needed to supplement that already available. Anti-gas training arrangements have been separately announced. As regards additional equipment, the main object at the present stage should be to ensure that full lists are prepared, and the question explored how far the articles which are lacking could be obtained from local sources in an emergency.

The Air Raid Precautions Department of the Home Office, or the Scottish Office, will be ready at any stage to give advice on the details of a proposed local scheme.

PART I.—GENERAL PROBLEM.

1. A.R.P. Handbooks.

A.R.P. Handbook No. 1—"Personal Protection against Gas"*—contains a general description of war gases and their effects, and deals with the subject of personal protection especially from the point of view of those who form part of an air raid precautions service and might have to go into gas in the course of their duty.

First aid treatment of gas casualties is described in A.R.P. Handbook No. 2—"First Aid for Gas Casualties".* The medical aspects of gas casualties are dealt with in detail in A.R.P. Handbook No. 3—"Treatment of Gas Casualties".*

2. Types of Casualties.

It is desirable in the first place to distinguish three main classes of patients who might require attention:—

- (a) persons who are suffering from physical injuries due to bomb explosions or fire or requiring treatment because they have inhaled gas, but who are not affected or contaminated with persistent gas;
- (b) persons suffering from such physical injuries who are also contaminated with persistent gas;
- (c) persons whose skin or clothing has been contaminated with persistent gas.

It is recommended that all these classes should be dealt with by a single organisation, which would combine the normal type of ambulance and hospital service for the treatment of accidents with special arrangements for dealing with gas contamination of persons and their clothing.

3. Nature of Organisation.

It is impossible to forecast the number of casualties which might have to be treated in any district, and it is therefore suggested that the provision for dealing with casualties and contaminated persons should be governed primarily by considerations of situation. In urban areas, first aid parties and first aid posts should be provided at frequent intervals, so that the parties could quickly reach any scene of damage and no casualty would have to walk far to reach a post.

The scale of hospital accommodation and equipment required will vary considerably with the locality. The necessary information has already been given to county and county borough councils in England and Wales, and to counties of cities, counties and large burghs in Scotland.

* See notice on back cover.

4. Areas for purposes of Organisation.

The organisation for a county borough outlined in Part II should be capable of providing all the necessary forms of treatment for the number of casualties assumed to be possible. Part III shows how similar complete organisations should be formed in counties or parts of counties, and also refers to the special position in the County of London. Part IV deals with the corresponding planning of areas in Scotland. The need for mutual assistance between areas in which complete schemes are in operation is explained in Part V.

Part II shows a complete organisation comprising the full range of medical and hospital services. It is unlikely that the full facilities outlined will be readily available outside large urban areas, such as county boroughs. The schemes covering non-county boroughs and county districts will therefore generally need to be joint schemes with neighbouring local authorities. It is therefore proposed that the county council should in the first instance plan out the areas capable of operating complete schemes, and subsequently supervise the preparation of those schemes.

Counties may either be organised as a whole or divided into a number of areas which can conveniently be worked separately. It is important, however, that separate areas should not be too big or include too many districts, otherwise the exercise of proper control may be difficult, especially if communications became uncertain.

Most county boroughs will be large enough to form independent units; but in preparing their schemes it is important that account should be taken of the possible needs of neighbouring county districts. There will be many cases in which the facilities available in the borough may have to serve the needs of adjacent areas. In such cases a joint scheme should be drawn up.

It is suggested, therefore, that each county council, through its special committee which was recommended in paragraph 18 of the Home Office circular on the 9th July, 1935, should review the position in the administrative county, and in collaboration with the corresponding committees in the county boroughs in the county (and the committees in neighbouring counties if need be) plan the areas which should have complete schemes for the required casualty organisation. In certain cases these areas might contain parts of two or more counties. (The corresponding action in Scotland is described in Part IV.)

As soon as a preliminary plan has been drawn up, the necessary arrangements should be made with the other councils concerned, and agreement reached as to the responsibility for preparing and supervising the scheme for the whole group.

It is not intended that any area within which a complete scheme is prepared should necessarily be limited to its own area as regards arrangements for hospital accommodation.

5. Financial Aspects.

As indicated in the Introduction, the first stages in the preparation of local schemes are mainly in the direction of the framing of plans and the training of personnel. The immediate expenditure to be met by local authorities should be practically confined, therefore, to matters of organisation and administration.

The schemes should be drawn up on the assumption that before the time came for incurring heavy expenditure an equitable apportionment of cost between national and local funds, as foreshadowed in paragraph 7 of the Home Office (or Scottish Office) circular of the 9th July, 1935, would be adopted, after consultation with representatives of local authorities. As indicated in paragraph 9 of the same circular, the Government will make arrangements for the supply of respirators, protective clothing and bleaching powder for the services covered by this Memorandum. (This will be supplementary to the general issue of respirators to the civil population at large.)

PART II.—SCHEME FOR A COUNTY BOROUGH.

The organisation outlined in this Part would be equally appropriate if adjacent county districts were included in the county borough scheme.

6. Outline of Organisation in a County Borough.

An official should be deputed to have general charge of the casualties organisation, and his first duty should be to prepare, in consultation with others as necessary, an appropriate scheme. The organisation should include—

- (a) First aid parties available to be despatched to any place where air raid casualties occurred.
- (b) First aid posts to which persons with comparatively minor injuries, or suffering slightly from gas, or with contaminated clothing, could walk or be carried for treatment and, if necessary, change of clothing.
- (c) "Casualty clearing hospitals" to which more serious cases could be taken by ambulance and, if not fit for immediate transfer to base hospitals, detained and treated.
- (d) "Base hospitals", situated, so far as possible, outside areas of special danger, for cases evacuated from casualty clearing hospitals. (Separate base hospitals may be impracticable in some cases.)
- (e) An ambulance service for use in conjunction with first aid parties and for the movement of stretcher cases from first aid posts to casualty clearing hospitals and from casualty clearing hospitals to base hospitals.

- (f) Laundry, etc., services for the decontamination of contaminated clothing.
- (g) A clerical organisation for keeping records of casualties, their property and valuables, and their places of treatment.

7. Personnel for Casualty Services.

It is assumed that, on the first aid side at any rate, the requisite personnel will have to be specially enrolled. The assistance of private medical practitioners and of nurses, and the co-operation of the St. John Ambulance Brigade and the British Red Cross Society*, will be essential. For preference younger men under 25 years of age who might want to enlist should not be taken. So far as possible the personnel of the first aid parties, and the staffs of the first aid posts and auxiliary decontamination services described below, should be selected in advance and trained in their duties. Arrangements should also be made in advance for supplementing, if need arose, the nursing staffs of hospitals selected as casualty clearing hospitals, and supplementing or perhaps creating staffs of base hospitals. All the staffs should be given anti-gas instruction.

The arrangements for the training of instructors to give local instruction in anti-gas precautions have already been communicated to local authorities. Instructors who have been trained at the Civilian Anti-Gas School should be used where possible.

8. First Aid Parties.

It is suggested that first aid parties should be composed of four men and equipped as indicated in Appendix B. For a densely populated area it is suggested that 12 to 15 parties should be formed for every 100,000 population. More parties may be desirable in some towns, either on account of their especial liability to attack, or owing to their having to provide mobile parties to serve surrounding districts; and fewer may suffice in parts of the country less exposed to hostile attack. In any case, provision should be made for additional trained personnel in reserve beyond those required to complete the selected number of parties.

These parties will be in addition to first aid personnel organised by industrial and commercial undertakings, or other private concerns.

Although the duties of the first aid parties will be distinct from those of the staffs of first aid posts, the training required is similar, and both sets of personnel can be regarded as more or less interchangeable. It is suggested that the local organisations of the

* The terms of the Government's arrangements with the Brigade and the Society are given in Appendix A.

St. John Ambulance Brigade or the British Red Cross Society, or of both bodies, should be asked to provide these services.

All members of the first aid parties will require respirators and protective clothing in case they have to enter gas-contaminated areas or buildings to reach the casualties.

The duties of first aid parties would be to attend to casualties where they occurred, and they should therefore be distributed over the district so that any part of it could be reached by one or more parties within a short time. In some cases it may be convenient to station first aid parties at first aid posts, but this is not essential. It is important that first aid parties should never be stationed singly. It should be possible for one party always to be on duty at each depot, and this involves having at least two parties, one of which could be resting. It is also important that every depot should be in communication with the headquarters of the organisation, so that the movements of the parties could be controlled.

Not less than 20 per cent. of the parties in each area should be held in central reserve, ready to reinforce any district where any large number of casualties occurred. The number of central reserve parties should always be ample in towns which are responsible for sending mobile parties into surrounding districts.

First aid parties' depots should therefore be selected with regard to the following considerations :—

- (a) They should be so distributed that any part of the area can be reached in a short time.
- (b) They should have accommodation, as indicated below, for the members of the parties and their equipment and, where necessary, for their transport.
- (c) They must be on the telephone so that messages can be got to them quickly so long as the telephone service is not damaged; but to provide against the breakdown of this service, it is desirable to be near a police or fire station or other centre at which reports of damage in the locality would be likely to be received automatically.
- (d) In general it is suggested that in an urban area depots should not be more than two miles apart.

The depot should include facilities for the members of first aid parties to wash themselves, when coming off duty, for the removal of possible contamination. The kind of accommodation required for this purpose is described in Appendix D to A.R.P. Handbook No. 1. In addition there should be storage accommodation for their equipment, and space for any vehicle with which the party may be provided. A mess room and kitchen should also be arranged, and it may be very desirable that the personnel of at least one party should sleep on the premises.

Where other buildings are not available, empty dwelling houses of moderate size may provide satisfactory depots for first aid parties. Arrangements might be made for any house which was empty when the emergency arose to be used. Local authorities might find it valuable to keep up to date a list of empty houses suitable for the purpose.

There should be an officer at each depot at which first aid parties are posted, who should be responsible for sending out the parties as required and arranging hours of duty and reliefs. There should also be an officer in charge of the whole of the first aid parties in the county borough, who should have the reserve parties, with motor transport, at his disposal, and who should be responsible not only for reinforcing particular parts of the borough but also for sending aid to other districts under the mutual assistance schemes mentioned later. These officers will require one or more assistants as reliefs.

9. First Aid Posts.

First aid posts should have combined facilities for first aid and for washing to remove contamination. Accommodation for both purposes should be provided in the same premises wherever possible, because if gas were used casualties might be contaminated as well as injured.

Sufficient posts should be provided in the built up areas of a county borough to make it unnecessary for any one to have to walk as much as a mile to reach the nearest post. In less populous outskirts distances between posts can be increased. If buildings for large posts are not readily available, it may be more convenient to have a series of smaller posts at more frequent intervals; but this latter course will probably mean an increase in the staff required.

The choice of premises for first aid posts is important, and may not always be easy. The requirements, which are described in Appendix C, are complicated by the need for keeping contaminated and uncontaminated persons apart, as well as maintaining separation between the sexes. The result is a need for a considerable floor area, and a number of separate rooms or compartments arranged to allow of a particular system of inter-communication.

It is realised that not many available buildings will be likely to lend themselves to use as satisfactory first aid posts without considerable internal alterations, even though these may be reduced to a minimum by adopting rapid and improvised methods. It is for this reason that it is very important that detailed plans should be prepared in advance, so that when an emergency arose the actual work could be begun at once. It will be of great advantage if the methods of construction, etc., adopted in these plans have been kept as simple as possible, so as to dispense with the need for any large amount of skilled labour, of which there might be a shortage when the work on all posts had to be done simultaneously.

Where a building is available which is already divided into rooms or compartments of suitable size, it would clearly be preferable to use it. If there was no hot water, for instance, an improvised system could perhaps be introduced in less time than it would take to erect partitions in another building where the water was already available.

Common types of buildings which might be used are schools (older buildings for preference, because of the light construction and quantity of glass in modern school buildings), public baths, concert or dance halls, institutes, parish halls, the space under large grandstands, etc.

Sports and golf pavilions, where their situation is suitable, might form posts of the smaller size. It is suggested that where a municipality was intending to build a sports or golf pavilion in future, in a position where there was any considerable population near at hand, consideration should be given to designing it especially with a view to its use as a first aid post if need arose. Suggestions on this subject are included in Appendix C.

It would be even more valuable if the same object could be borne in mind in designing new public buildings in the congested parts of a town. In certain circumstances a clinic, a cleansing and disinfection station, or an institute of some kind, might be made more readily adaptable to a first aid post if this possibility was kept in mind when the plans were being prepared.

In the event of an emergency arising without warning, air attack might begin before there had been time to complete the pre-arranged first aid posts. In that event it would be necessary to establish emergency posts in any buildings available—e.g. empty dwelling houses or shops. This should, however, be a temporary measure only, because the facilities could not be adequate, and the difficulties of the staffs of the posts would be acute. The work on the pre-arranged posts should be pressed on as fast as possible, and it is again emphasised how important it is that the plans for the work should have been drawn up in detail before the emergency arose.

Recommendations regarding the staffs of the posts are contained in A.R.P. Handbook No. 2. They will require respirators and protective clothing. Rest rooms and feeding arrangements for the staff will have to be provided in addition to the accommodation for patients, but these could if necessary be arranged in a neighbouring building. In certain areas it may also be advisable to provide sleeping accommodation.

The posts will have to be provided with supplies of clothing to be issued to contaminated patients in exchange for their contaminated clothing, which will have to be sent for decontamination. Arrangements for decontaminated clothing to be eventually returned to its owner, in so far as this may be possible, will also need consideration.

10. Casualty Clearing Hospitals.

Casualty clearing hospitals, which should be in the area where casualties are likely to occur, should normally be the local hospitals, where operating theatres and beds would be available for more serious cases. It is proposed that on a threat of air attack beds in these hospitals should be freed by the evacuation to out-lying hospitals, existing or improvised, of all patients who can be removed with safety, and that thereafter no patients, whether air raid casualties or otherwise, should be accepted for lengthy treatment, unless they are unfit to be taken elsewhere. Following a raid, no casualties who are fit to be removed to base hospitals should be retained in casualty clearing hospitals. This is partly to ensure that as many beds as possible are kept free for further casualties, and partly because it is to be assumed that casualty clearing hospitals will be in areas more liable to air raid damage than base hospitals.

Unless a first aid post is provided close at hand, a hospital must be prepared to deal with exactly the same class of casualties as a first aid post, because it would be impossible and unreasonable to attempt to prevent injured persons proceeding direct to a hospital if it was nearer than the nearest post. Hospitals should not, however, be expected to cater for people who are contaminated without being injured; they will not have clean outdoor clothing available to give away to replace contaminated clothing. Such persons must be sent to first aid posts if they cannot do what is required at home.

The hospitals will, however, have to be prepared to cleanse injured patients who are also contaminated before admitting them into the wards. The type of accommodation needed will follow the lines of rooms B. 1 and B. 2 of a first aid post described in Appendix C. The necessary adaptations and equipment should be worked out beforehand, and lists prepared of any other equipment and stores required to enable the hospital adequately to fill its place in the scheme.

In cases where new construction is being undertaken at a hospital, and particularly during alterations to an out-patients' department, it may be possible without much difficulty to provide accommodation which will serve for the reception of contaminated casualties.

The staffs of casualty clearing hospitals will need respirators, and a proportion will require protective clothing also.

11. Base Hospitals.

For the purpose of base hospitals, it may be necessary to select places which are not normally used as hospitals. Places in rural areas should be selected so far as possible, but the hospitals must not be so far from the borough as to create a serious transport problem. It may be necessary to have recourse to mental hospitals,

public assistance institutions, and possibly infectious disease hospitals. In the selection of base hospitals co-operation with other local authorities will probably be needed.

In some cases, even in a county borough, it may be desirable to use a hospital both as a casualty clearing hospital and a base hospital. Similarly a hospital in the country may have to be used as a general casualty hospital for the district in which it is situated and at the same time as a base hospital for a neighbouring urban area.

An important part of the organisation of base hospitals will be the arrangements for collecting the necessary staffs. As these hospitals should be equipped with some facilities for dealing with contaminated patients, a proportion of the staff will require respirators and protective clothing.

In some cases the provision of base hospitals may involve adaptation of premises, and the provision of beds and other hospital equipment and stores not already available in the buildings selected. Complete plans for these adaptations should be drawn up, with lists of the equipment and stores required, and steps should be taken to explore how far these could be obtained locally.

12. Ambulance Services.

Ambulances will be required

- (a) for evacuating ordinary cases from hospitals selected to be casualty clearing hospitals;
- (b) for transporting casualties picked up by first aid parties to casualty clearing hospitals;
- (c) for transferring serious cases from first aid posts to casualty clearing hospitals or base hospitals;
- (d) for transferring cases from casualty clearing hospitals to base hospitals.

Certain ambulances belonging to the Order of St. John and the British Red Cross Society, and to other private bodies and undertakings, will be available to supplement the ambulances owned by local authorities; but it may be that even these will not suffice, and other vehicles will then have to be adapted for carrying stretcher cases. In any case, additional drivers and attendants will be required. All drivers and attendants will need respirators, and must be trained in anti-gas precautions (as well as in first aid if possible). Those engaged on work with first aid parties will need protective clothing.

It will be important to arrange that ambulances are posted at convenient places whence they can readily be sent to collect casualties wherever they may occur. These ambulance depots should be on the telephone, and an effort should be made to avoid places

having a narrow or difficult egress which might be completely blocked by the effects of a single bomb.

An organisation, under an appropriate officer, should be specially planned for controlling the whole of the ambulances available in the area. This officer should be under the official responsible for the casualty services as a whole, and should be in close touch with the officers in charge of the first aid parties, and the hospitals, as well as with the police and fire brigade.

A great disadvantage at the present time is that there is no standardised form of stretcher for use in ambulances. This fact might entail loss of valuable time if each ambulance, after delivering a load of casualties, had to wait for its own stretchers to be returned, since they might first have to be decontaminated. To remove this difficulty it is strongly recommended that whenever new ambulances are ordered, whether by local authorities or by private bodies, they should be so fitted as to be capable of taking the standard Army pattern of stretcher.*

13. Laundry, etc., Services.

An organisation will be needed for the decontamination of clothing. Certain methods of decontamination are described in Section 24 of A.R.P. Handbook No. 1, and each local authority should arrange for suitable equipment to be earmarked. Trained personnel will be required for handling and treating contaminated clothing, because of the risks involved, and transport will also be required for the carrying of contaminated and decontaminated clothing.

14. Records Section.

Clerical staffs should be provided to enable records to be kept of casualties and their treatment at every first aid post and at every hospital, including the arrangements for the custody of patients' clothing and valuables. A central records section will also be required.

15. Summary of Advance Preparations.

The preparation which a county borough council should now begin to make can be summarised as follows:—

- (a) An official should be deputed to take executive charge of the organisation, and his principal assistants in the various branches of the organisation should be chosen. (The local branch of the St. John Ambulance Brigade or the British Red Cross Society might usefully be consulted at this early stage.)

* The Army pattern of stretcher is 7 ft. 9 ins. long and 1 ft. 11 ins. wide, and stands 6 ins. high.

- (b) Sites should be selected as depots for first aid parties and the number of parties required should be determined. Lists should be made of the equipment required for these parties, and the sources from which it could be assembled.
- (c) Sites for first aid posts should be selected, and plans prepared of any necessary adaptations; lists of the supplementary equipment, etc. needed should be made.
- (d) A survey should be made of the accommodation available for the necessary hospitals, and plans prepared of any adaptations: lists of any additional equipment, etc., should be made.
- (e) The local representatives of the St. John Ambulance Brigade and the British Red Cross Society should be approached and their co-operation invited in the preparation of arrangements for the recruitment and training of the necessary personnel, including additional hospital staffs and personnel for transport work and decontamination. Arrangements should be made for instructors in anti-gas measures to be trained at the Civilian Anti-Gas School as opportunity offers.
- (f) Local medical practitioners and nursing associations should be invited to give their assistance.
- (g) The ambulance facilities in the borough should be tabulated, and an estimate made of the number of supplementary ambulances which would be needed and could be improvised from light vans or other suitable types of vehicles available locally.
- (h) A survey should be made of the laundry and disinfection services available for the decontamination of clothing.
- (i) Arrangements should be worked out for the necessary clerical and other auxiliary services.

PART III.—SCHEMES OUTSIDE COUNTY BOROUGHS IN ENGLAND AND WALES.

16. Requirements in Rural Areas.

The type of organisation suitable in a county borough would be quite inappropriate in a sparsely populated rural area.

In a part of the country which consisted of a series of villages and scattered houses, a full system of first aid posts, casualty clearing hospitals and base hospitals is quite unnecessary. It is only rarely that districts of this sort will contain targets on which hostile airmen would deliberately drop bombs, and the risk of casualties arises in most cases from the possibility of bombs being dropped haphazard. Even so, there will be a strong probability of the bombs falling in

places where they will do no damage, and the risk of any large number of casualties occurring in a country village may fortunately be expected to be remote.

In such districts reliance should primarily be placed on the local doctors and district nurses, and the local organisations of the St. John Ambulance Brigade and the British Red Cross Society. Definite plans should however be made to supplement these local facilities by mobile first aid parties, available to be called from neighbouring towns if any exceptional number of casualties occurred.

Similarly, as regards hospital treatment, it should not be necessary to reserve beds in any hospital for the reception of air raid casualties from particular villages. If such casualties should occur, they could be conveyed in improvised ambulances to the nearest available hospital.

The problem in a purely rural area has, therefore, two aspects. The first is the training of the local doctors and nurses, and if possible additional voluntary personnel, in the special treatment of gas casualties, and particularly in the methods of dealing with gas-contamination. (The removal of bodily contamination can be carried out anywhere where hot water and a change of clothing are available, so long as proper precautions are taken against danger from discarded garments.) The second is a widespread organisation covering a large area of country which would enable first aid parties to be sent where they were needed and would ensure that hospital accommodation should be available if necessity arose.

17. Areas of Intermediate Character.

There are towns which are not county boroughs but which, by reason of their population and their liability to attack, will require as full a casualty organisation as county boroughs, and there are rural districts in which centres of population will require the provision of some kind of scheme for first aid posts at frequent intervals and for reserving hospital beds for air raid casualties. These towns and areas will require schemes modelled on the same lines as a county borough. The more the full scheme of organisation recommended for a county borough is modified and simplified, however, to meet other sets of circumstances, the greater will be the need for co-operation with the neighbouring authorities, for the purpose of obtaining by joint action the facilities which could not be provided specially in each part of the area.

18. Schemes for County Areas.

It is for these reasons that county councils are recommended in Section 4 above to plan out large areas for the organisation of complete schemes. Such schemes should arrange for the joint provision, within the group, of the necessary casualty clearing

hospitals and base hospitals, the latter to be shared, possibly, with a neighbouring county group or with some county borough. It would be an important part of a county scheme to organise mobile first aid parties, with motor transport, in suitable centres where the personnel were available, which could be used to cover the surrounding country districts as required. It should not be difficult to draw up a scheme under which every village should have a call upon two or even three first aid parties, in a pre-arranged order of priority.

These county schemes should therefore resemble the scheme for a county borough so far as concerns the main centres of population in the area covered; and for the rural parts of the area should clearly indicate to what places each village is to look for first aid parties, and where hospital accommodation can be obtained if required.

The immediate action to be taken by the county council, or by any body to which it may depute responsibility for organising the scheme in any particular county group, would be as indicated in Section 15 above with such adaptations as may be necessary to meet local circumstances.

19. Position in the County of London.

The organisation to be set up in the City of London and in metropolitan boroughs should be similar to that recommended for a county borough in Part II, except that the provision of hospital and ambulance facilities in the County of London will be arranged by a centralised organisation.

PART IV.—ORGANISATION IN SCOTLAND.

20. Preparation of Local Schemes in Scotland.

Parts II and III of this Memorandum indicate the general lines of local schemes appropriate in large towns and in county areas respectively, but the schemes are described in terms applicable to the English local government system. The same general considerations apply to the situation in Scotland, but modifications are necessary in view of special Scottish circumstances.

In the case of Scotland, it will be recalled that paragraphs 14 and 15 of the Scottish Office circular No. 3026 of the 9th July, 1935, indicated that the area of the unit to be adopted should not be less than the county or joint county or county of a city and that, in counties and joint counties, the scheme would fall to be prepared by the county councils and town councils in conjunction. For this purpose it was suggested in paragraph 18 of that circular that a joint committee for each county, representing the county councils and the town councils in the county, should be formed.

The scheme outlined in Part II of this Memorandum as suitable for a county borough in England is suitable for adoption in a county of a city in Scotland, with the substitution of references to the St. Andrew's Ambulance Association and the Scottish Branch of the British Red Cross Society* for references to the St. John Ambulance Brigade and the British Red Cross Society. The town councils of the four counties of cities, or the committees which they may have appointed, should proceed to consider the matter on these lines.

In the case of counties or joint counties outside the four cities, the problem will fall to be considered in the light of local circumstances by joint committees formed in accordance with circular 3026. As in England, the county can in some cases be organised as a whole; in other cases, it will be necessary to divide it into parts. Where a unit consists of, or is based upon, a large burgh, the county borough scheme or a modification of it may be taken as a model. Where a unit is essentially rural in character, the considerations mentioned in Section 16 of this Memorandum apply. In all cases, the importance of planning for large areas and ensuring the maximum degree of co-operation between adjoining areas and authorities must be stressed.

PART V.—CO-OPERATION BETWEEN AREAS HAVING SEPARATE SCHEMES.

21. Schemes for Mutual Assistance.

The preceding Parts of this Memorandum have outlined the complete organisations to be prepared for large towns on the one hand and for groups of smaller towns and county districts on the other hand. It is desirable that every area which is large enough and has a community of interest should have such a complete organisation. At the same time, the schemes could not be regarded as complete unless each of those self-contained organisations had made arrangements for mutual assistance with its neighbours. It is impossible to foresee the distribution of bombs which might be dropped, and the total number of bombs which might reasonably be expected in a whole county might quite possibly be dropped on a particular day in a small district in the county, in which case that district would have good ground for calling on assistance from all the casualty organisations available within reach. Every scheme of organisation should therefore make provision for sending mobile first aid parties into neighbouring areas if required, and for placing hospital beds at the disposal of casualties from neighbouring areas; and definite arrangements for these purposes should be concerted between the local authorities concerned.

* See Appendix A.

APPENDIX A.

The Government's arrangements with certain First Aid Organisations.

The following are the conditions under which the St. John Ambulance Brigade and the British Red Cross Society have undertaken to afford assistance to the Government and to local authorities in connection with air raid precautions:

(a) The Brigade/Society will undertake to encourage its members to volunteer for local air raid precautions services whenever volunteers are called for by the Government or by a local authority and will maintain whatever organisation is best adapted to facilitate this enrolment.

(b) The Brigade/Society will undertake the training of its members in air raid precautions generally, and in anti-gas measures in particular, at its own expense, and for this purpose will arrange for a sufficient number of its members to be trained at the Civilian Anti-Gas School as Instructors in anti-gas measures so far as vacancies at the School can be allotted to it.

(c) The Brigade/Society will respond, so far as is within its power, to reasonable requests from local authorities for assistance in the organisation of air raid precautions services to deal with civil casualties, and for the provision of lectures and instruction in air raid precautions to persons outside its own membership, provided that the Brigade/Society shall not be called upon to incur expense in the latter connection.

The St. Andrew's Ambulance Association and the Scottish Branch of the British Red Cross Society have accepted the same conditions.

It will be observed from condition (b) that all four bodies undertake to provide at their own expense all necessary training of their own members. It is hoped that this will mean that local authorities will be able to secure the greater part, at least, of their personnel for air raid casualties services without incurring any expenditure.

With regard to the latter part of condition (c), which refers to the training of persons not members of one of the four bodies, and to the education of the general public in air raid precautionary matters, it is believed that, where the expenses were not met by fees paid by those undergoing training, the body in question could be relieved of expense in several directions by the local authorities without the latter incurring any direct expenditure: e.g. by their authorising the use of rooms or halls in public buildings, and lending stretchers, blankets, and similar articles which might be required for demonstration purposes.

APPENDIX B.

Composition and Equipment of First Aid Parties.

It is suggested that a first aid party on duty should normally consist of four men, trained in first aid, apart from any ambulance crews that may be working with them. This number makes no allowance for casualties, and reserves of trained men should be available in addition.

Each member of the party on duty should be equipped with—

- respirator
- protective clothing
- first aid pouch (*see below*).

The party should also carry—

- a stretcher (with oilskin cover in case of contaminated casualties)
- a blanket
- surgical haversack (*see below*)
- spare respirators (for casualties).

The suggested contents of the first aid pouch and surgical haversack, which should be of durable waterproof material, such as will withstand decontamination by approved methods, are:—

First aid pouch (one per man).

- 1 Triangular Bandage, unbleached calico, B.P.C., 38 in. × 54 in., wrapped.
- 1 White Open Wove Bandage, B.P.C., 1 in. × 3 yds., wrapped.
- 1 White Open Wove Bandage, B.P.C., 2 in. × 4 yds., wrapped.
- 1 ½ oz. Plain Lint, B.P.C., wrapped and cartoned.
- 1 ½ oz. Absorbent Cotton Wool, B.P.C., interleaved, wrapped and cartoned.
- 1 Pair Surgical Scissors, 5 in.
- 6 Safety Pins, nickel plated on brass, in metal container: size 3.
- 3 30 minim Ampoules, 2 per cent. Alcoholic Solution of Iodine, in card containers.
- 1 2 oz. Stoppered Bottle of Sal Volatile, in metal case.
- 1 2 oz. Graduated Medicine Tumbler, in strong container.
- 1 Piece strong Cane, 6 in. long.
- Elastic Plaster Dressings, assorted sizes, for minor injuries.

Surgical haversack (one per party).

- 1 Set Wooden Splints, with 3 metal pockets.
- 3 Cotton Webbing Straps for securing Splints.
- 1 lb. Cotton Wool, B.P.C.
- 2 Triangular Bandages, unbleached calico, B.P.C., 38 in. × 54 in., wrapped singly.
- 3 Elastic Plaster Dressings, for finger injuries, wrapped singly.

- 6 Elastic Plaster Dressings, for small wounds, wrapped singly.
- 1 Roll (3 yds.) of Gauze, B.P.C.
- 4 Large First Aid Dressings.*
- 4 White Open Wove Bandages, B.P.C., 1 in. \times 3 yds., wrapped singly.
- 3 White Open Wove Bandages, B.P.C., 2 in. \times 4 yds., wrapped singly.
- 3 White Open Wove Bandages, B.P.C., 3 in. \times 4 yds., wrapped singly.
- 1 Spool Adhesive Plaster, Zinc Oxide, B.P.C., $\frac{1}{2}$ in. \times $2\frac{1}{2}$ yds.
- 12 Safety Pins, nickel plated on Brass, size 3, in suitable container.
- 1 2 oz. Absorbent Cotton Wool, B.P.C., interleaved, wrapped and cartoned.
- 1 1 oz. Boric Lint, B.P.C., wrapped and cartoned.
- 1 Pair Surgical Scissors, 5 in.
- 1 oz. 2 per cent. Alcoholic Solution of Iodine, in capillary container.
- 1 2 oz. Graduated Medicine Tumbler, in strong container.
- 1 Tourniquet, St. John's, or similar type.
- 1 Bottle Smelling Salts, or 6 Ampoules Aromatic Ammonia, in container.

* Dressings should be of materials designated in the B.P.C., and of a grade or quality not lower than the standards prescribed therein. They should be sterilised as prescribed in the B.P.C. for surgical dressings (*i.e.*, by steam heat and not chemically) and be so packed as to remain sterile.

APPENDIX C.

Arrangement of First Aid Posts.

A First Aid Post should be laid out and equipped for the treatment of casualties of all types not sufficiently serious to be taken straight to hospital by ambulance. Some serious cases must however be expected to reach the Post either on foot or on stretchers because the gravity of the injury was not recognised or because no ambulance was available. In addition provision will be required for persons whose clothing or skin was contaminated (whether or not they were wounded) to be washed and get a change of clothing.

Such cases would all require urgent treatment of some sort. Each First Aid Post must therefore be capable of dealing with all kinds of casualties and of handling considerable numbers after a raid. The existence of unused facilities at neighbouring Posts would be of little avail, owing to the difficulty of transferring casualties before treatment.

A First Aid Post should be prepared to handle three classes of casualties of each sex, and as each class requires separate accommodation a complete Post should, if possible, have six separate sets of rooms. The classes of casualties and the Sections of the Post in which they would be treated, are:—

- (a) Section A—wounded or gassed, who are *not* contaminated with persistent gas;
- (b) Section B—wounded or gassed, who are *also* contaminated with persistent gas;
- (c) Section C—unwounded persons whose skin or clothing is contaminated—these would not be “casualties” at all if they got early decontamination.

Separation is important since casualties in Section A require first aid only, and must be kept entirely apart from the contaminated casualties admitted to Sections B and C. Section B is a combination of cleansing and first aid, and it is desirable, though not essential, to keep the wounded who are contaminated apart from the unwounded who would use Section C.

It is realised that lack of space may sometimes make it impossible to provide all the rooms recommended, in which case all cleansing of persons contaminated with gas should be carried out in the same Section. Those who require first aid can then be transferred, after cleansing, to Section A. Whatever arrangements are made, however, it is most important to keep contaminated and uncontaminated casualties separate

An important point is whether it is possible to use more than one floor. There can be no doubt that in general a Post which is entirely on the ground floor is best. Basements seldom have a sufficient number of entrances and exits. Stretchers have to be handled in Sections A and B, and stairs may therefore cause difficulty. Again contaminated persons admitted to Sections B and C will contaminate all corridors, staircases, etc., through which they pass before being cleansed, and this cleansing should therefore be provided as near as possible to the entrance.

The general position may be stated as follows:—

- (a) Section A is best on the ground floor, but may be in a basement or on a first floor if there is easy access for stretchers.
- (b) For Section B the easy handling of stretchers is important just as in Section A, and in addition there is the need for reaching the cleansing room without using corridors or staircases required for general circulation.

(c) Section C does not entail the use of stretchers, and there is, therefore, no objection to basement accommodation, provided it is not below the level of drains, and is not liable to be flooded in the event of bomb damage to nearby water mains, etc. It will seldom be justifiable to use a first floor because the entrance stair will be contaminated and must not then be used for any other purpose.

In order to help local authorities in the selection of buildings for use as First Aid Posts, the following suggestions are put forward as to the amount of accommodation needed in each Section. Two scales of accommodation are given. The first is for the larger Posts which would be suitable for thickly populated parts of towns, where Posts were provided at normal intervals of $1\frac{1}{2}$ to 2 miles apart. The second is for a small Post which might be suitable in a small town, or in the more or less scattered outskirts of a large town.

The floor space required in each room or compartment is given, with the number of patients it would accommodate at a time. A stretcher case under treatment is assumed to require 50 sq. ft., or 30 sq. ft. when treatment was finished. A sitting case is assumed to require 15 sq. ft. in most circumstances.

	Large Post.		Small Post.	
	Area of room.	No. of patients* at one time.	Area of room.	No. of patients* at one time.
SECTION A (wounded or gassed, uncontaminated).	sq. ft.		sq. ft.	
Room A.1—Reception ...	450	16	250	8
Room A.2—First aid ...	600	12	400	8
Room A.3—Waiting ...	550	30	350	15
	1,600		1,000	
SECTION B (wounded or gassed and contaminated).				
Room. B.1—Reception and undressing	300	8	200	4
Room B.2—Washing and bleach treatment	300	6	200	4
Room B.3—First aid... ..	300	6	200	4
Room B.4—Waiting... ..	350	12	250	6
	1,250		850	
SECTION C (unwounded contaminated).				
Room C.1—Reception and undressing	500	30	275	15
Room C.2—Washing and bleach treatment	250	15	175	8
Room C.3—Dressing	450	30	250	15
	1,200		700	
Total for one sex	4,050		2,550	

* Including a due proportion of stretcher cases.

These areas do not include a certain amount of space needed for offices and stores, nor any rooms for use by the staff.

It is not intended to lay down hard and fast rules for the sizes of Posts, or of rooms within Posts, but the object must be to secure a steady flow of patients through the various stages of treatment in times of pressure, and for this reason the *relative* sizes of the rooms throughout the Post is important. If all the rooms are of standard size except one, and that one is appreciably smaller, then it acts as a bottle-neck, and the rate of progress through the Section is correspondingly reduced.

There is no objection to individual rooms being larger than is recommended, if the arrangement of the building works out in that way. Similarly two small adjoining rooms can be used for the same purpose in place of one larger room.

Posts of intermediate size can be arranged by varying proportionately the sizes of each room.

It is desirable that a complete Post (both sexes) should be in one set of premises. Where this is not possible, a separate Post can be provided for each sex. Alternatively the first aid portions (Sections A and B) can be housed in one building, and the accommodation for contaminated unwounded (Section C) in another. Nevertheless, whatever arrangement is adopted, the separate premises which together constitute a complete Post (for men and women) should not be more than a hundred yards or so apart, and if possible within sight of one another. Members of the public in need of treatment will not distinguish in advance which Section they will need, and they must not be allowed to come to one building only to find that they have to go to another building a quarter of a mile or more away. If the Post has to be split an increase in staff may also be required.

Important Points in the Arrangement of Posts.

The following general points are of importance in the arrangement of every Post.

- (i) All lights must be obscured at night, so that none are visible from outside, except a dim sign indicating the position of the Post.
- (ii) All external doorways must be provided with air locks unless they can be put out of use and sealed.
- (iii) Provision must be made for gas-proofing all windows, and possibly for splinter protection, in accordance with the general advice to be issued.
- (iv) To prevent damage from broken glass, roof lights (unless they are of "armoured" glass) should either be boarded underneath, or if the light is essential fine-mesh wire netting should be suspended close under the glass.
- (v) All rooms will require to be warmed in winter.
- (vi) Where a hall or swimming bath (floored over as is often done in winter) is selected, the partitions between compartments can be of light and improvised construction, except where they separate accommodation for contaminated patients from that for uncontaminated patients. They need only be 7 ft. high, and can be of wood, or canvas on a wood frame, or consist of curtains hung on rods (wires are less desirable). Partitions composed of movable sections might be valuable, because the sizes of various compartments could then be adjusted to meet the needs of the situation as it developed. These movable partitions should be of a type not easily knocked over: ordinary folding screens are not desirable.

- (vii) Accommodation for contaminated patients should be so arranged as to prevent the spread of vapour to adjoining rooms. Compartments where vapour might collect should be separated from the rest of the building, if possible, by partitions reaching to the ceiling, but where this is difficult they may be given painted or varnished canvas ceilings at a height of, say, 10 feet. The partitions should be capable of being washed, and if of wood should be painted with enamel or varnished. Stout canvas partitions can also give satisfactory results for a time if painted or varnished.
- (viii) In any arrangement, care must be taken that the entrances, passages, etc., to be used by contaminated casualties are not also used by uncontaminated persons.
- (ix) Alternative illumination (e.g. hurricane lamps) must be provided in case of failure of the lighting supply. Similarly the hot water supply should not be solely dependent on gas or electricity.
- (x) The tanks, etc., for storage of water should be ample, in case the external supply is interrupted by bomb damage.

Lay-out of each Section of a First Aid Post.

Section A—First Aid (Uncontaminated Casualties).

Fig. 1 shows a diagrammatic layout for this Section, which should consist essentially of three rooms. The divisions between these "rooms" can be of the simplest—curtains or light partitions up to a height of 7 ft. would suffice.

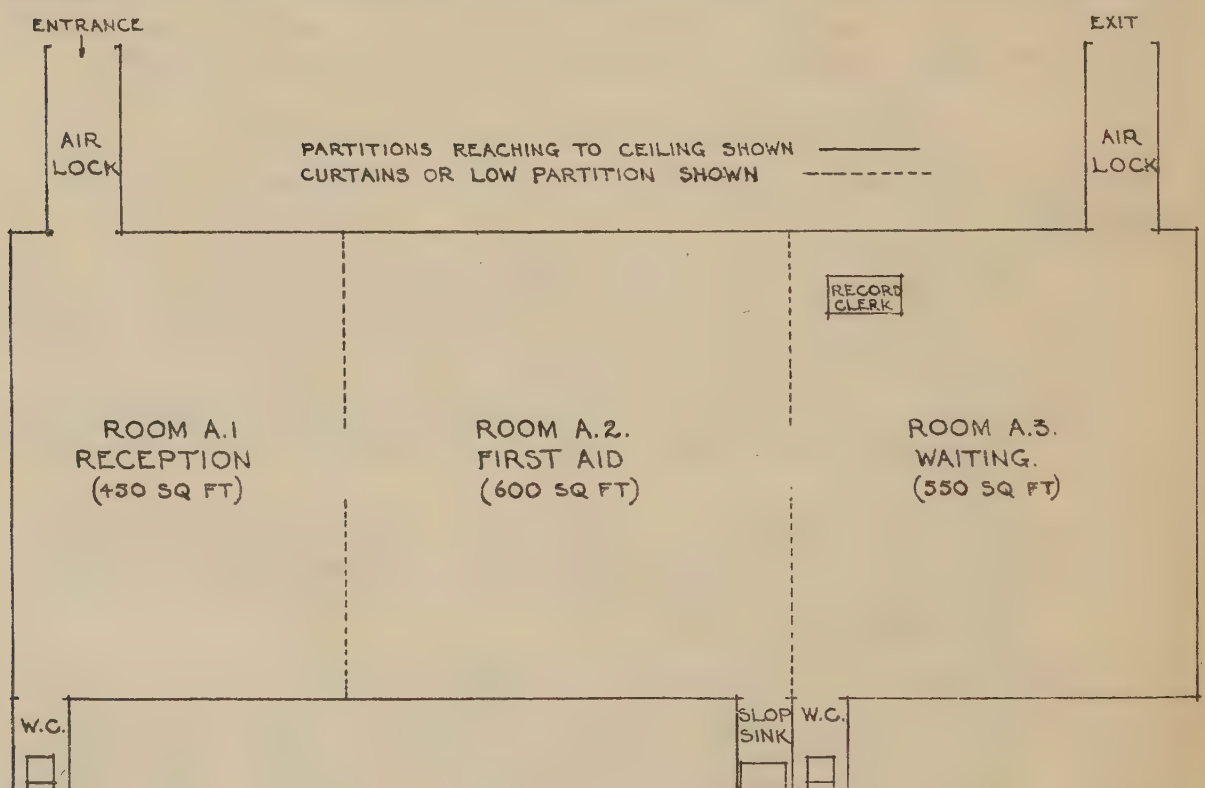


Fig. 1. Lay-out of Section A—First Aid (Uncontaminated Casualties) for one sex
Sizes are given for a large Post.

Room A.1.—In a large Post, the reception room should accommodate 16 patients, including four stretcher cases, requiring about 450 sq. ft. In a small Post, for half the above number of patients, about 250 sq. ft. should be enough.

Forms or chairs should be provided for sitting cases. A w.c. for use by patients should be accessible from this room.

Room A.2.—In a large Post the first aid room should be capable of accommodating six stretchers and six sitting cases, requiring about 600 sq. ft. For four stretchers and four sitting cases in a small Post about 400 sq. ft. would be required.

Warm water is necessary in this room, together with some water-boiling apparatus for sterilising instruments; but running water is not essential if it is not already laid on. Shelving or cupboards would be needed for dressings and medicaments.

It would be advisable to have curtains or screens available to screen off a small section of the room, for gassed patients for whom the main treatment might be rest. (It is to be remembered that there may be gassed casualties who are not contaminated with persistent gas.)

It would save staff if this first aid room could receive also the wounded admitted as contaminated to Section B, after passing through the cleansing treatment. In that event its size should be suitably increased.

A slop sink or lavatory should be accessible from this room for emptying pans, &c., of patients under treatment.

Room A.3.—This waiting room would be for patients whose wounds have been dressed. It should be large enough to accommodate those waiting for ambulances and to permit those who are to be discharged to rest for a time before proceeding home. There should also be space for a record clerk at a table.

In a large Post, 550 sq. ft. is suggested, for eight stretchers and 24 sitting cases. In a small Post about 350 sq. ft. should accommodate half this number.

A w.c. should be accessible to patients in this room.

Section B—First Aid (Contaminated Casualties).

Fig. 2 shows a diagrammatic lay-out of this Section, which should consist of four rooms, the last two of which can be combined with the last two rooms of Section A.

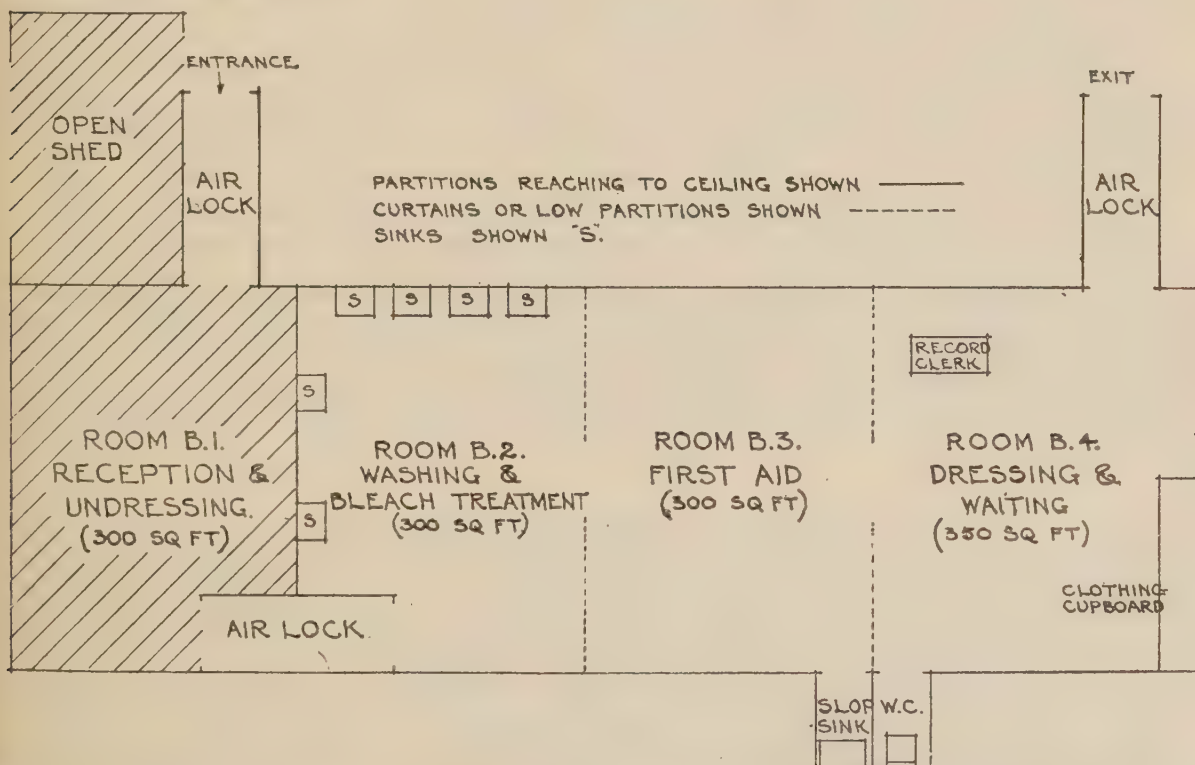


Fig. 2. Lay-out of Section B—First Aid (Contaminated Casualties) for one sex
Sizes are given for a large Post.

The shading shows portions in which gas vapour might collect.

Outside this Section there should if possible be an open shed in which patients can leave grossly contaminated outer garments, so as to reduce the amount of vapour brought into the building itself.

The reception room will, in any case, be liable to accumulate gas vapour, and should therefore be separated from the remainder of the building by a wall or partition which reaches to the ceiling, or alternatively should have a false ceiling, of painted or varnished canvas, at a height of 10 ft. The divisions between the remaining rooms of the Section can if necessary be curtains or other light partitions 7 ft. high.

Room B.1.—In this reception and undressing room, in a large Post, there should be space for two stretcher cases and six sitting cases: 300 sq. ft. is suggested. In a small Post 200 sq. ft. should suffice for half the number of patients.

It is assumed that all these patients will have to be undressed by orderlies.

Bins with close-fitting lids (e.g., galvanised iron sanitary bins) will be required for contaminated clothing.

In this room a latrine bucket, behind a screen, should be provided, if no w.c. which could be specially reserved is available, because these contaminated patients cannot be allowed to use w.c.'s. which might be used by other people.

Room B.2.—In the washing room in this Section, where the patients will have to be washed by orderlies, it is suggested that sinks, with hot and cold water laid on, will be the most convenient form of fitting. Zinc washing baths, or ordinary baths, in which walking cases could stand while being washed, might also be useful. A considerable amount of water will get on to the floor which, unless it is of impervious material, should be covered with lead or linoleum. Devices for improvising floor drainage are discussed under Section C below.

Before being washed, certain patients may need bleach treatment and eye treatment, which should be given in this room.

To provide for two stretcher cases and four sitting cases at a time, in a large Post, a space of 300 sq. ft. is suggested. In a small Post, not less than 200 sq. ft. should be given to this room.

Room B.3.—Where possible, the first aid room should be combined with the Room A.2 in Section A. If not, its equipment should be similar.

Where separate from Room A.2, the size of the room in a large Post should be about 300 sq. ft. to take two stretcher cases and four sitting cases. In a small Post 200 sq. ft. should be sufficient.

Where combined, about 200-300 sq. ft. should be added to the size of Room A.2.

Room B.4.—This dressing and waiting room differs from Room A.3 in Section A in that patients to be discharged would need to dress there in clean clothing, and a clothes store or cupboard would be required. (Patients for hospital would presumably be wrapped in blankets.) In a large Post, this room would require about 350 sq. ft., or 250 sq. ft. in a small Post.

Nevertheless, where possible, this room may be combined with the Room A.3, which should be increased by some 250-350 sq. ft. and have a clothing cupboard or store added.

The room should in any event include a table for a record clerk, and have a w.c. accessible for patients.

Section C—Treatment for Contaminated Persons (Unwounded).

Fig. 3 shows the requirements in this Section—namely three rooms in series, exclusive of an outside shed which should be provided, where possible, for the discarding of grossly contaminated outer clothing.

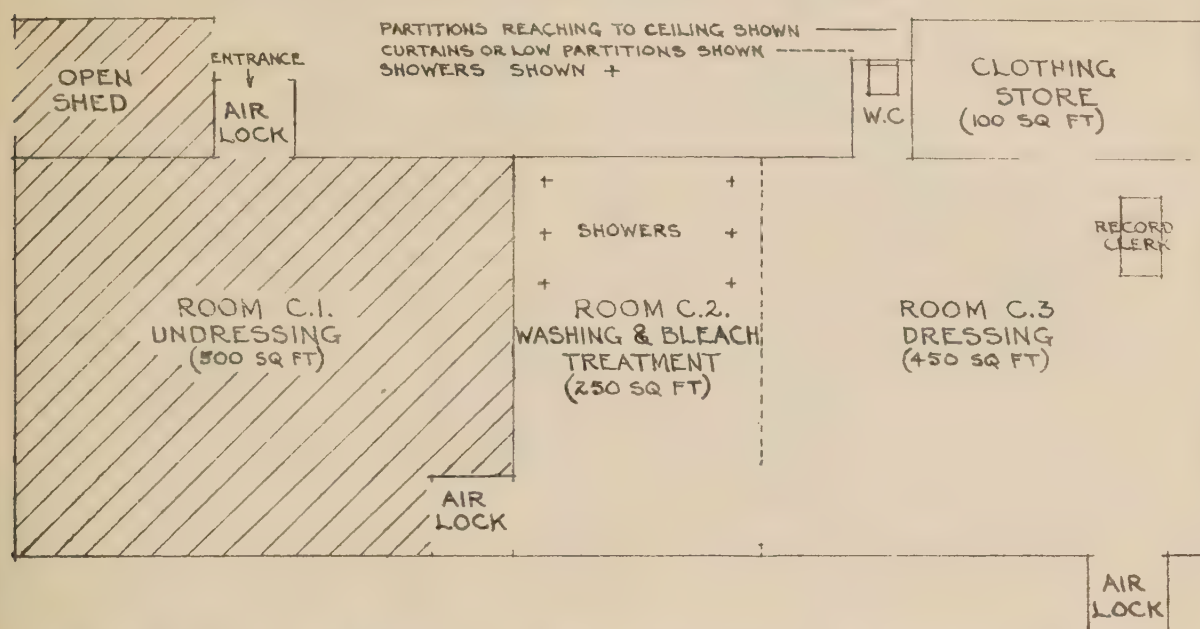


Fig. 3. Lay-out of Section C—Cleansing (Unwounded) for one sex. Sizes are given for a large Post.

The shading shows portions in which gas vapour might collect.

As in the case of Section B, the partition between the reception room and the remainder of the building should reach to the ceiling, unless a false ceiling is provided over the reception room, and should be provided with an air lock.

Room C.1.—The reception and undressing room in a large Post should accommodate 30 people, requiring 500 sq. ft. In a small Post, 275 sq. ft. would suffice for 15 people. Forms should be provided for undressing: bins with close-fitting lids (e.g., galvanised iron sanitary bins) will be required for contaminated clothing, also one or two latrine buckets behind screens, if no w.c. which could be specially reserved is available, because contaminated people cannot be allowed to use w.c.'s. which might be used by others.

Room C.2.—Bleach and eye treatment may first have to be given, followed by washing. For the latter purpose it is suggested that the simplest procedure will be for each person to go under a shower to get wet, withdraw and soap himself, and then pass under another shower before drying. This scheme can most economically be met by two sets of showers with the washing space between. For a large Post six showers are suggested: for a small Post four. The water can if necessary be led to the showers in rubber piping.

Drainage under the showers may have to be improvised. If the floor is of wood, it can be covered with lead or linoleum, which should be turned up the walls, at the skirtings, for about a foot. If the floor is of concrete it should be treated with sodium silicate solution (one part of water glass to four parts of water). If there is no fall for drainage, the water can be swept to an improvised drain, either in the floor or in the wall. Alternatively a low sloping platform can be built under the showers, with a drain underneath, and the surface covered with linoleum, or preferably with lead sheeting.

In a large Post this room should be 250 sq. ft. to accommodate 15 people, and 175 sq. ft. would be a minimum for a small Post.

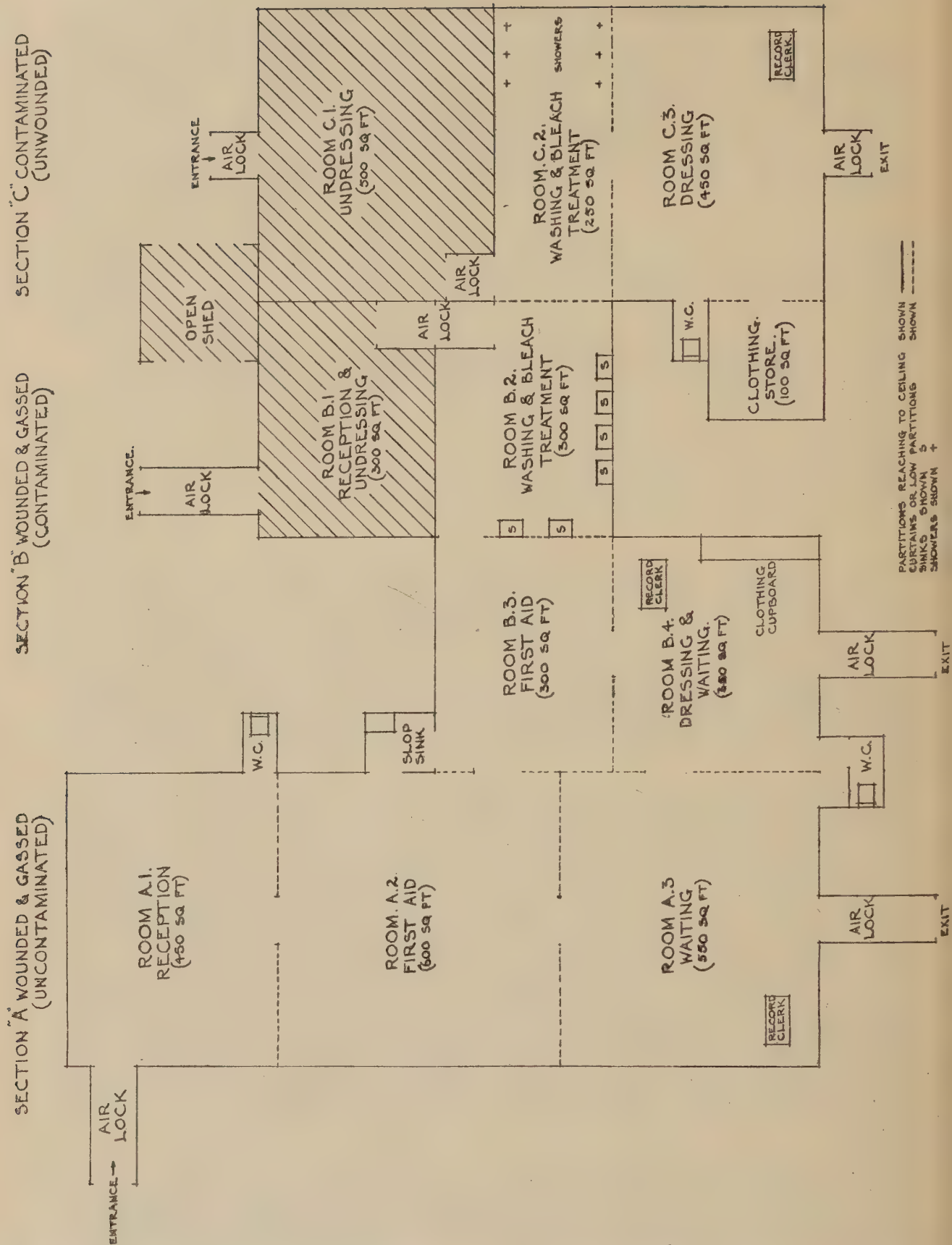


Fig. 4. The lay-out of a First Aid Post for one sex showing sizes of rooms for a large Post.
The shading shows portions in which gas vapour might collect.

It should be noted that the first aid and waiting rooms in Sections A and B are brought side by side so as to form practically one room in each case. Similarly the reception and washing rooms of Sections B and C are together, and might be combined.

Room C.3.—The dressing room should be 450 sq. ft. in a large Post, to accommodate 30 people, together with a record clerk at a table. In a small Post 250 sq. ft. might be enough.

In association with this room there would need to be a clothing store, estimated (for a large Post) at 100 sq. ft. for 150 suits of clothing, on tiers of shelves: also a w.c. for the patients' use.

Lay-Outs for Complete Posts.

Fig. 4 shows diagrammatically a combined arrangement of the three Sections of a First Aid Post required to deal with one sex. It is not intended to represent an actual building. The sizes of the rooms for a large Post are marked, and the sketch is drawn to scale, so as to show the *relative* sizes of the various rooms.

It should be noticed that the entrance to Section A for uncontaminated patients is shown well away from the contaminated entrances to Sections B and C. These latter, however, are close together, and share the same outside shed where outer clothing can be left. The same entrance to the building can in fact be used for the contaminated wounded and unwounded of one sex, the separation of Section B from Section C, if feasible at all, coming inside the entrance. It is however important to remember that these patients will contaminate the corridors or passages which they use between the entrance and the undressing rooms, and Rooms B.1 and C.1 should always be as near as possible to the entrance or entrances by which the patients come into the building.

As already indicated, the first aid rooms A.2 and B.3 are really better combined than separated. If this is done the waiting rooms A.3 and B.4 could be replaced by a common waiting room for Sections A and B. In this case, however, more than one waiting room may be an advantage, since it offers opportunities of separating the patients, according to the seriousness of the case, or to destination.

If in a particular building it was necessary to receive and cleanse contaminated wounded and unwounded without separation (so that Rooms B.1 and C.1 were combined, and Rooms B.2 and C.2) it would still be best to provide a separate dressing room (C.3) for the unwounded persons.

The sketch shows 4 w.c.s (not including the latrine buckets in the reception rooms for contaminated cases). One range of lavatories for each sex would in fact meet these requirements if access can be obtained from the appropriate rooms. In planning this access care must be taken that there is no passing through or crossing the contaminated rooms B.1 and C.1 or the corridors between those rooms and the contaminated entrance or entrances.

The illustrations on the following pages show suggested adaptations of typical buildings to form complete First Aid Posts.

Fig. 5 shows a possible adaptation of public baths. It is assumed that the swimming bath is boarded over. The lay-out has been largely governed by the position of the available entrances and exits, and by the fact that stretchers could not be manoeuvred into the cubicles in the private baths section of the building.

This lay-out is also deficient in access to lavatories, especially for the women. Latrine buckets or other improvised lavatories would be needed.

Fig. 6 shows a similar adaptation of a concert and dancing pavilion. The arrangements in this case are more straightforward, and the external verandahs fit very conveniently.

In both these cases the first aid rooms of Sections A and B are combined. The floor area in both buildings is sufficient for a large Post.

Fig. 5.—Public baths adapted to form a First Aid Post.
The shading shows portions in which gas vapour might collect.

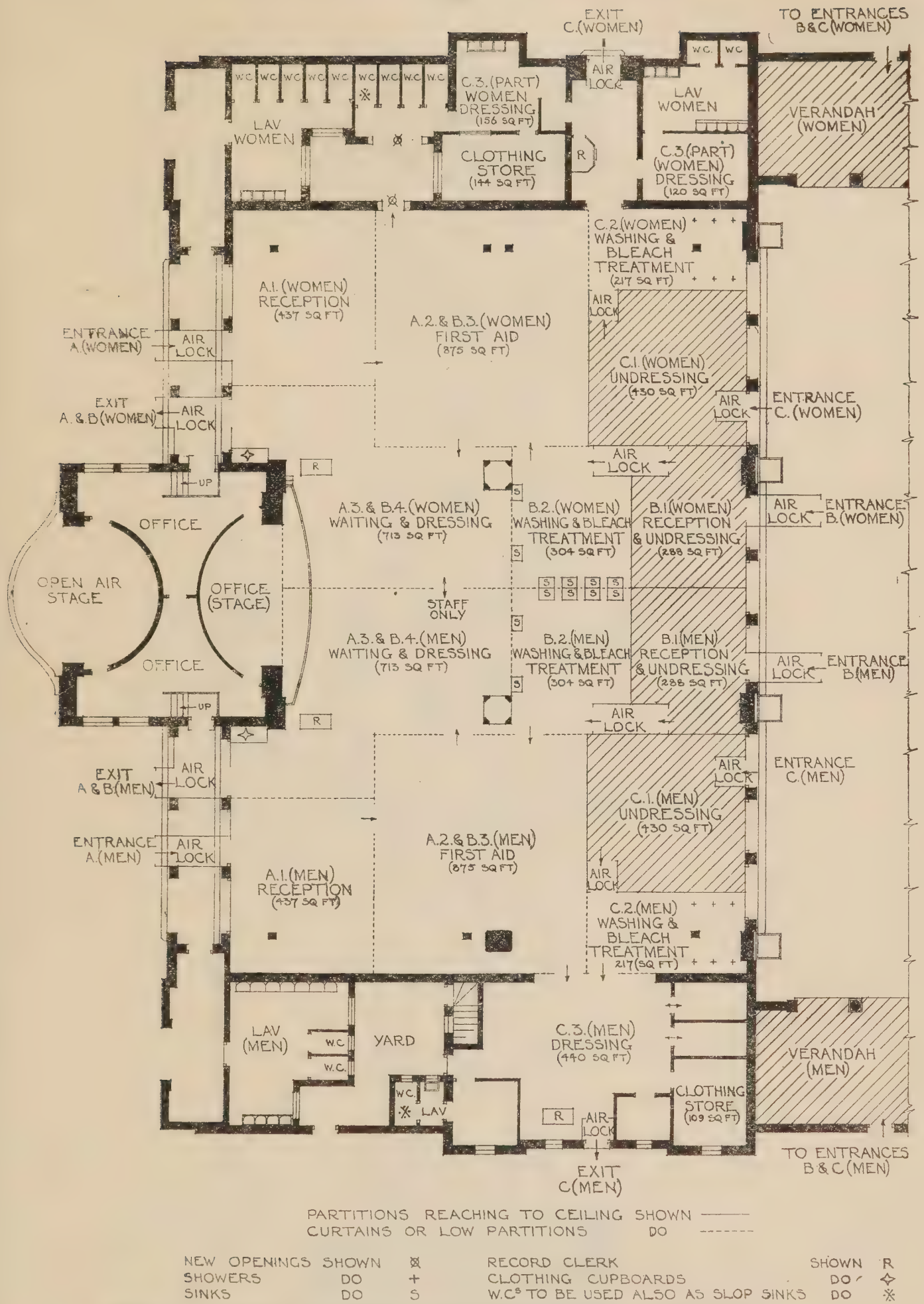


Fig. 6. A concert and dancing pavilion adapted to form a First Aid Post.

The shading shows portions in which gas vapour might collect.



Fig. 7. Plan of a Sports Pavilion designed for adaptation as a First Aid Post. See also Fig. 8

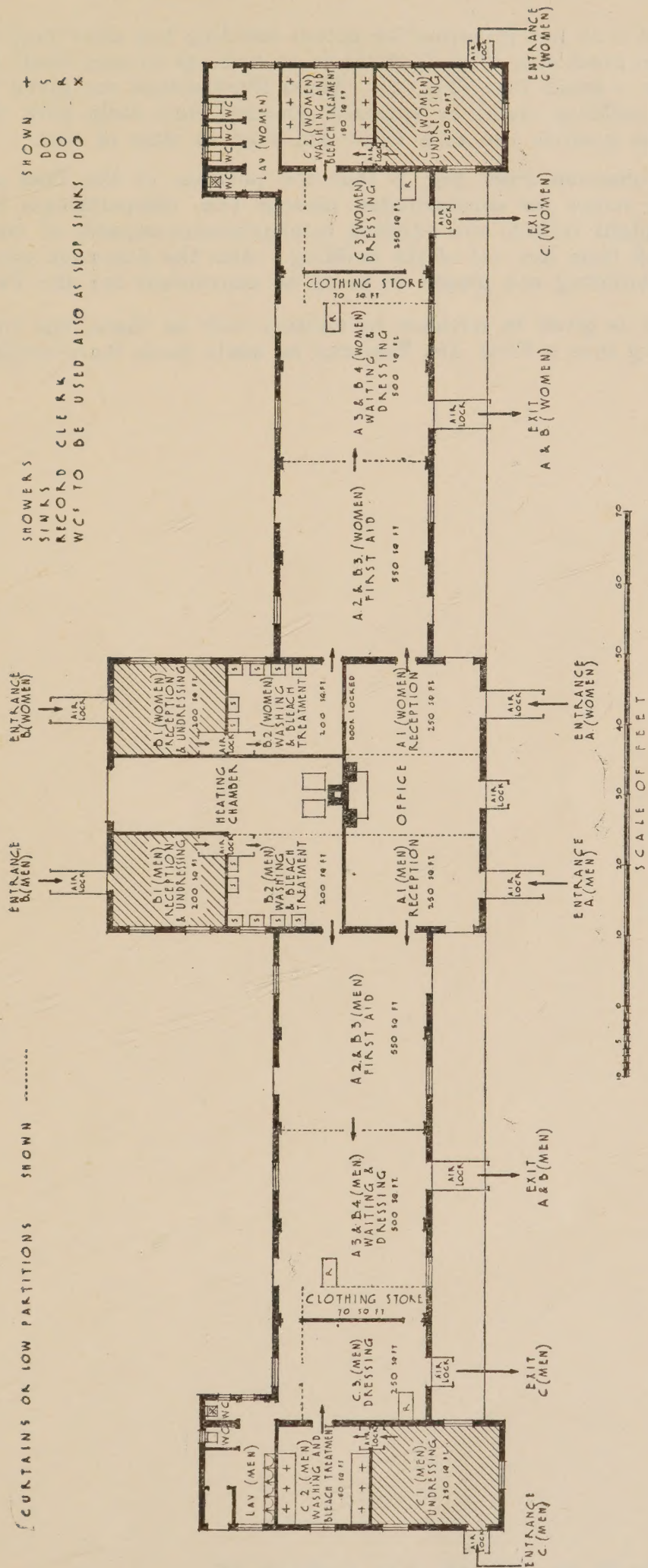


Fig. 8. The Sports Pavilion shown in Fig. 7 adapted to form a small First Aid Post.

The shading shows portions in which gas vapour might collect.

Figs. 7 and 8 do not illustrate an actual building but show how a sports pavilion of no great size (Fig. 7) could be so built as to lend itself to rapid adaptation as a small Post (Fig. 8). These illustrations are given to show how such a building could be specially planned and built with the idea in mind of its possible use as a First Aid Post in time of war.

It will be observed from Fig. 8 that the portions of the Post allocated to undressing rooms for contaminated persons (i.e. compartments in which gas vapour might collect) are existing compartments capable of being properly sealed off from the rest of the building. Also the doorways provided in the original building are placed so as to be convenient for the Post.

If attention is given in advance to matters such as these, the conversion of the building into a First Aid Post can be made much more quickly.

Official Publications on Air Raid Precautions

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- No. 1.—Personal Protection against Gas (*2nd edition*) 6d. (8d.).
No. 2.—First Aid for Gas Casualties (*2nd edition*) 4d. (5d.).
No. 4.—Decontamination of Materials (*1st edition*) 6d. (7d.).
No. 5.—Structural Precautions against Bombs and Gas (*in preparation*).
No. 6.—Air Raid Precautions in Factories and Business Premises 6d. (7d.).
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MEMORANDA—

- No. 1.—Organisation of Air Raid Casualties Services (*2nd edition*) 6d. (7d.).
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No. 3.—Organisation of Decontamination Services (*1st edition*) 2d. (2½d.).
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